
2010

CONTACT VOLTAGE TEST and

FACILITY INSPECTION

ANNUAL REPORT

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

Report on the results of contact voltage tests and facility inspections

for the period beginning January 1, 2010 and ending on December 31, 2010

February 15, 2011

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I. Background

The New York State Public Service Commission's ("PSC" or "Commission") Electric Safety Standards ("Safety Standards"), issued on January 5, 2005 in Case 04-M-0159, with subsequent revisions issued on July 21, 2005 and December 15, 2008, require utilities to conduct an annual system-wide contact (stray) voltage detection program and a five-year equipment inspection program to mitigate contact (stray) voltage risks to the public and promote reliability.

The term "stray voltage" is historically associated with neutral-to-earth voltage (NEV) encountered by farm livestock at contact points. Stray voltage is a natural phenomenon that can be found at low levels between two contact points at any property where electricity is grounded.[1] In recent years, the term "contact voltage" has been used to describe voltage resulting from abnormal power system conditions associated with low voltage secondary system faults.

This report describes Consolidated Edison Company of New York, Inc's ("Con Edison" or "the Company") contact voltage detection program and equipment inspection program conducted in 2010.

II. Company Overview

Con Edison is an investor owned utility that provides electric service to approximately 3.2 million customers in a service area of approximately 660 square miles within New York State encompassing New York City and most of Westchester County. The Company operates an electric transmission and distribution ("T&D") system that provides a high level of reliability in a very dense urban environment.

- Distribution
  a. Underground –The underground system has approximately 308,000 manholes, service boxes, and transformer vaults and above ground, pad mounted structures; 24,369 miles of underground duct; 30,428 underground transformers; and approximately 93,733 miles of underground cable including primary, secondary and service cables. Underground network cables operating at primary voltages of 27 kV and 13.8 kV supply 30,428 underground transformers that step the primary voltages down to 120/208 distribution voltages that are used by customers.

[1] Electrical systems — both farm systems and utility distribution systems — are grounded to the earth to ensure safety and reliability. Inevitably, some current flows through the earth at each point where the electrical system is grounded and a small voltage develops. This voltage is called neutral-to-earth voltage (NEV). When NEV is found at animal contact points, it is frequently called stray voltage. Stray voltage is this small voltage that is measured between two points that livestock can simultaneously touch. If these points are simultaneously contacted by an animal, a current will flow through the animal. See, http://www.wisconsinpublicservice.com/business/farm_voltage_questions.aspx#whatis

b. Overhead – The overhead system includes: 155 auto loops, **7 -** 4 kV multi-bank substations, 243 – 4 kV unit substations, approximately 284,000 Con Edison or Verizon-owned poles, and approximately 34,000 miles of overhead wires including primary, secondary, and services. Cables operating at primary voltages of 33 kV, 27 kV, 13.8 kV, and 4 kV supply 47,324 overhead transformers that step the primary voltages down to 120/208/240 distribution voltages that are used by customers.

c. Streetlights –Con Edison does not own, install, or maintain streetlights and traffic signals within its service territory. The New York City Department of Transportation (NYCDOT) and the local Westchester municipalities primarily own the streetlights and traffic signals in New York City and Westchester County. There are approximately 185,000 metal pole street lights, of which approximately 44,000 are metal pole traffic signals, within Con Edison's service territory. Con Edison cables and structures directly supply electricity to approximately 120,500 of these streetlights and traffic signals.

- Transmission
  a. Underground – The underground transmission system delivers power at 69 kV, 138 kV, and 345 kV to various switching substations and area substations. The underground system has approximately 2,900 manholes and approximately 720**Error! Reference source not found.** circuit miles of cable.
  b. Overhead - The overhead transmission system consists of 138 kV and 345 kV high voltage cable supported on towers and poles on rights-of-way located for the most part, north of New York City and terminating in Westchester County where the underground transmission system begins.
- Substations and Unit Substations
  There are 39 transmission substations, 62 area substations, 243 unit substations, and 11 Public Utility Regulating Stations (PURS).

III. Company Facilities

Structure Categories

Approximately 778,000 individual facilities in Con Edison's service area must be tested for the presence of contact voltage each year. Approximately 593,000 of these facilities must be inspected every five years. These facilities are broken down into the following five categories:

- **Overhead Distribution** – There are approximately 284,000 distribution pole structures that support electric facilities in Con Edison's overhead distribution system. Distribution overhead facilities are included in both the contact voltage and inspection programs. The contact voltage testing criteria include all utility-owned or joint use wooden poles with utility electrical facilities

located on public thoroughfares or customer property, including backyards or alleys. Contact voltage tests are performed on all wooden poles with metallic attachments, such as, ground wires, ground rods, anchor guy wires, riser pipes, or any electrical equipment within reach of the general public.

- **Underground T&D and Underground Residential Distribution** – There are approximately 308,000 underground facilities in Con Edison's T&D systems. A subsurface structure is defined as any manhole (MH), service box (SB), transformer vaults (V,VS), transformer manholes (TM), customer boxes (CB), buried boxes (BB), injunction boxes (IJ), P-Boxes (PB), and T-Tap boxes and switchgears specifically associated with Underground Residential Distribution systems ("URD"). These facilities are tested in either the manual and mobile contact voltage testing program and are included in the facility inspection program. The contact voltage testing criteria include all subsurface structures, including above ground, pad-mounted structures.

- **Street Lights and Traffic Signals** – There are approximately 185,000 metal pole street lights, of which approximately 44,000 are traffic signals, within Con Edison's service territory. Streetlights and traffic signals are included in the contact voltage testing program only. Area and street lighting that is privately owned is not included in the contact voltage testing program, as per the Safety Standards. Con Edison does not own any metal pole streetlights, and therefore, these structures are not included in the facility inspection program. The contact voltage testing criteria include all municipally owned metal pole streetlights, traffic signals, and pedestrian crosswalk signals located on publicly accessible thoroughfares and areas that are directly supplied by the Company. All contact voltage testing of street lights is performed at night while the fixtures are energized.

- **Substations** – Con Edison operates and maintains substations at 101 locations and PURS substation facilities at 11 locations (some locations contain more than one facility). Con Edison's substations and PURS stations are included in both the contact voltage program and the facility inspection program. The contact voltage testing criteria consist of perimeter fencing and other electrically conductive materials where such materials are accessible to the general public. These materials include but are not limited to fences, doors, roll-up gates, metallic delivery boxes, dielectric fluid delivery ports and Siamese connections.

- **Unit Substations** – Con Edison operates and maintains 7 – 4kV multi bank and 243 – 4kV unit substations. Con Edison's 4kV multi-bank and unit stations are included in both the contact voltage program and the facility inspection program. The contact voltage testing criteria consist of perimeter fencing and other electrically conductive materials where such materials are accessible to the general public. These materials include but are not limited to fences, doors, roll-up gates, metallic delivery boxes, and Siamese connections.

- **Overhead Transmission** –Con Edison's overhead transmission system includes 1,212 individual poles or towers. These transmission structures support circuit voltages of 69 kilovolts and greater. Structures that support circuits of lower voltage in addition to the transmission voltage levels are included in this category. All transmission structures are included in both the contact voltage and facility inspection programs. The contact voltage testing criteria include all structures, guys, and down leads attached to these structures.

IV. Contact Voltage Testing Program

The Safety Standards require that Con Edison complete annual contact voltage testing by December 31 each year.

During the annual period ending December 31, 2010, Con Edison tested for contact voltage on all its T&D facilities with publicly accessible components capable of conducting electricity. In addition, Con Edison tested for contact voltage on all municipally owned metallic streetlights and traffic signals that are located on thoroughfares or areas that are publicly accessible and are directly supplied with electricity by the Company.

In addition, and in compliance with the Safety Standards, Con Edison:

- Immediately safeguarded and /or mitigated all voltage findings greater than or equal to 1.0 volt. The Company uses its best efforts to repair within 45 days all Company-owned equipment determined to have caused a voltage finding. Those that exceed 45 days are periodically monitored and tracked to completion. In instances where the contact voltage finding was determined to be caused by equipment that is not owned by Con Edison, the Company, after making the area safe, notified a responsible person associated with the premises of the unsafe condition and the need for the owner to arrange for a permanent repair.
- Tested all publicly accessible structures, streetlights, sidewalks and metal objects within a 30 foot radius of an energized structure, or contact voltage finding greater than or equal to 1.0 volt.
- Responded to, investigated and mitigated positive findings of shock incidents reported by the public.

Training

Con Edison manages its contact voltage testing program and uses both Company field personnel and contractor forces to conduct the testing of utility owned electric facilities and municipal streetlights.

Training for the contact voltage testing program consists of an eight hour class at our training facility for contractor forces as well as on the job training, performed by Supervisors, for Company field forces. The training is based on Company

specifications on how to properly test an electric facility for contact voltage. Topics covered in the training are:

> The PSC Safety Standards
> Scope of the contact voltage testing program
> Performing the test and completing the testing form
> Data entry process
> Status of contact voltage testing to annual goal
> Abnormal systems conditions to be reported
> Performance mechanism

Underground Distribution Contact Voltage Testing

Of the total population of approximately 308,000 underground facilities, 163,637 fielded for manual testing. The remaining facilities were tested under the mobile contact voltage program. Of the 163,637 underground facilities visited during manual testing, 3,666 did not require contact voltage testing due to inaccessibility, structures taken out of service, or customer owned structures.

Inaccessible underground facilities include:

a. Locked Gate/Fence – Structures behind locked gates and fences that are not accessible to the public, i.e., facilities located in fenced areas owned by other utilities, such as, Water Companies.
b. Company Property – Structures located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.
c. Construction – A structure located within a construction site. These structures are accessible only to construction personnel.
d. Buried – A structure below grade that requires excavation to access the structure.
e. Vaults – Structures located inside buildings. These structures are accessible only to Company and building maintenance personnel.
f. Highway – Structures located on highways and on exit and entrance highway ramps. The performance of contact voltage testing would constitute an unacceptable risk to the employee.

Overhead System Contact Voltage Testing

Based on the initial overhead system inspection performed in 2005, there were approximately 284,000 overhead facilities (Con Edison or Verizon owned) found and inspected. This population of approximately 284,000 was the initial population used for creating the Company's Contact Voltage Testing Database for overhead system facilities. Out of the initial 284,000, approximately 6000

facilities have since been marked “test not required” in the testing database because they no longer exist on the system, or because they are wood poles that have no attached appurtenances capable of conducting electricity; their electrically conductive appurtenances are not accessible to the public (pre-wired wood); the facilities are enclosed in fiberglass (non-conductive materials); the facilities are de-energized; and / or the facilities are deemed inaccessible to the public.

For each annual testing cycle, all facilities are checked on each mapping plate and in the field to ensure that conditions have not changed on facilities marked “test not required” in the past. In 2010, the population of Company owned overhead facilities that were fielded for manual testing was 279,117. Of the 279,117 overhead facilities visited in 2010 to be tested for contact voltage, 3,646 did not require contact voltage testing because of the reasons stated below.

Inaccessible overhead facilities include:

a. Locked Gate/Fence – Structures behind locked gates and fences that are not accessible to the public, i.e., facilities located in fenced areas owned by other utilities, such as, Water Companies.
b. Company Property – Structures located on Company property, such as substations, are accessible only to Company personnel and authorized contractors.
c. Construction – A structure located within a construction site. These structures are accessible only to construction personnel.
d. Highway – Structures located on highways and exit and entrance highway ramps. The performance of contact voltage testing would constitute an unacceptable risk to the employee.
e. Rail Road – Structures behind railroad fences or on a railroad right-of-way.

Streetlight and Traffic Signal Contact Voltage Testing

Of the total population of approximately 185,000 streetlight and traffic signal facilities, approximately 128,000 facilities to which the Company directly supplies electric service were required to be tested manually. The remaining facilities were tested under the mobile contact voltage program. Of the facilities visited, 245 did not require contact voltage testing because these structures were not publicly accessible.

Inaccessible streetlights and traffic signals include:

a. Construction – A structure located within a construction site. These structures are only accessible to construction personnel.
b. Restricted Access – Structures located within areas with active public improvement efforts or the World Trade Center.

Underground Transmission Contact Voltage Testing

There are approximately 2,900 underground transmission facilities that comprise the Company's underground transmission system. Of the approximately 2,900 underground transmission facilities, 1,367 facilities did not require contact voltage testing because these structures were not publicly accessible.

Inaccessible transmission facilities include:

a. Construction – A structure located within a construction site. These structures are only accessible to construction personnel.
b. Con Edison Property – Structures located on or adjacent to Con Edison properties which are secured from the public via fencing or other barriers and are inaccessible to the public.
c. Bridges – Structures located on bridges, such as bridge joints
d. Buried - A structure below grade that requires excavation to access the structure

Overhead Transmission Contact Voltage Testing

Con Edison visited and tested all of the 1,212 overhead transmission facilities on the Company's overhead transmission system.

Mobile Contact Voltage Testing

In accordance with the PSC's "Order Establishing Rates for Electric Service," issued March 25, 2008 in Case 08-E-0539, Con Edison performed 12 underground system scans using mobile contact voltage detection technology. In accordance with the PSC's "Order Adopting Changes to Electric Safety Standards," issued December 15, 2008 in Case 04-M-0159, the 12 underground system scans must be performed between January 1st and December 31st of each calendar year. In addition, Con Edison performed one underground system scan using mobile contact voltage detection technology in 4 cities with a population of at least 50,000 in Westchester County in 2010. These cities are New Rochelle, Yonkers, White Plains and Mount Vernon.

Results of the 2010 Contact Testing Program

The results of the 2010 Contact Testing Program are provided the following appendixes to this report:

- Appendix 1, titled "Contact Voltage Testing Summary"
- Appendix 2a, titled, "Summary of Energized Objects - Mobile Testing"
- Appendix 2b, titled, "Summary of Energized Objects - Manual Testing + Other"

- Appendix 3, titled, “Summary of Shock Reports from the Public.”

IV. Facility Inspection Program

The Safety Standards require Con Edison to visually inspect at least 20% of its facilities annually, and inspect 100% of its electric facilities every five years. In addition, the Safety Standards require that defective equipment found during an inspection be repaired. In accordance with the Safety Standards, Con Edison uses the following severity levels to establish priority for repairs and scheduling:

- Level I – Repair as soon as possible but not longer than one week. A Level I deficiency is an actual or imminent safety hazard to the public or poses a serious and immediate threat to the delivery of power. Critical safety hazards present at the time of the inspection shall be guarded until the hazard is mitigated.
- Level II – Repair within one year. A Level II deficiency is likely to fail prior to the next inspection cycle and represent a threat to safety and / or reliability should a failure occur prior to repair.
- Level III – Repair within three years. A Level III deficiency does not present immediate safety or operational concerns and would likely have minimum impact on the safe and reliable delivery of power if it does fail prior to repair.
- Level IV – Condition found but repairs not needed at this time. Level IV is used to track atypical conditions that do not require repair within a five year timeframe. This level should be used for future monitoring purposes and planning proactive maintenance activities.

In accordance with the Safety Standards, when a temporary repair is located during inspection or performed by the Company, best efforts are put forth to make a permanent repair of the facility within 90 days. Temporary repairs that remain on the system for more than 90 days are due to extraordinary circumstances, i.e. storms, and require extensive repair activity.

Training

Con Edison manages its inspection program and uses both Company field personnel and contractor forces to conduct the inspection of utility owned electric facilities.

Training of the contractor force utilized to perform inspections on our overhead system consists of classes at our learning facility as well as on the job training performed by Contractor Supervisors who have attended a train the trainer session with a Con Edison Subject Mater Expert (SME). For Company field forces, the training is based on Company specifications on how to properly inspect an electric facility which is learned through their promotional classes, as well as on the job training performed by their Supervisor.

In addition to the above, the Secondary System Analysis section of Distribution Engineering conducted train-the-trainer sessions in each of the major workout locations since the inception of the program. The participants included the managers, planners, and supervisors of the crews that would be performing the inspections. The Secondary System Analysis Team has also conducted various training seminars at all of the major work out locations which included the following topics:

- The PSC Safety Standards
- Scope of the inspection
- Completing the inspection form
- Data entry process
- Status of inspections to annual goal
- Repairs pending
- Accounting of the inspection
- Performance mechanism

In addition to the train-the-trainer sessions, an E-Learning training module was developed. This training module can be accessed from any computer on the Con Edison network. This class is also part of the curriculum in career advancement for new mechanics.

Results of the 2010 Facility Inspection Program

The results of the 2010 Facility Testing Program and associated facility repairs are provided in Appendix 4, titled "Summary of Deficiencies and Repair Activity Resulting from the Inspection Process."

VI. Annual Performance Targets

Con Edison performed the required contact voltage testing and facilities inspections in accordance with the requirements of the Safety Standards.

In compliance with the Safety Standards, Con Edison has met the annual performance target for contact voltage testing of 100% of publicly accessible electric facilities and streetlights and traffic signals supplied directly from Con Edison's distribution system for the annual period ending December 31, 2010.

In compliance with the Safety Standards, Con Edison has met the first-year performance target for inspection of 20% of its electric facilities for the five-year period ending December 31, 2014. In 2010, Con Edison inspected 24.3% of its overall population of electric facilities. The percentages of inspections by structure category are summarized in the table below.

Facility Inspection Program Results

Category	Actual Cumulative Inspected as of 2010
Overhead Distribution	31.47%
Overhead Transmission	100%
Underground / URD Distribution	16.92%
Underground Transmission	25.12%
Substation and PURS Facilities	23.21
Unit Substations	100%
Company-owned Streetlights*	0

* Con Edison does not own streetlight facilities. These facilities are owned by the City of New York and municipalities located in Westchester County.

5-Year Inspection Performance Summary

The following tables provide the cumulative percentages of inspections by structure category over the current five-year (2010-2014) inspection cycle.

Overhead Distribution Facilities

Inspection Year	Unique Number of Overhead Distribution Structures Inspected	% of Overall Facilities Inspected (Cumulative)
2010	85,124	31.47%
2011		
2012		
2013		
2014		

Overhead Transmission Facilities

Inspection Year	Unique Number of Overhead Transmission Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2010	1212	100%*
2011		
2012		
2013		
2014		

* Con Edison inspects the entirety of its overhead transmission system once a year

Underground Distribution and URD Facilities

Inspection Year	Unique Number of Underground / URD Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2010	47,017	16.92%
2011	0	
2012	0	
2013	0	
2014	0	

Underground Transmission Facilities

Inspection Year	Gross Number of Underground Transmission Facilities Inspected (Gross Inspections)	% of Overall Facilities Inspected (Cumulative)
2010	542	25.12%*
2011	0	
2012	0	
2013	0	
2014	0	

*Con Edison inspects its underground transmission system at multiple intervals, all less then 5 years. The data above captures all inspections performed. The total number of underground transmission facilities to be inspected is 2158.

Substation Facilities (including PURS)

Inspection Year	Unique Number of Substation Facilities (including PURS)	% of Overall Facilities Inspected (Cumulative)
2010	26	23.21%
2011	0	
2012	0	
2013	0	
2014	0	

Unit Substation Facilities

Inspection Year	Unique Number of Unit Substation Facilities Inspected	% of Overall Facilities Inspected (Cumulative)
2010	243	100%
2011	0	
2012	0	
2013	0	
2014	0	

VII. Certifications

Pursuant to Section 7 of the Safety Standards, the president or officer of each utility with direct responsibility for overseeing contact voltage testing and facility inspections shall provide an annual certification to the Commission that the utility has, to the best of his or her knowledge, exercised due diligence in carrying out a plan, including quality assurance, that is designed to meet the contact voltage testing and inspection requirements, and that the utility has:

- Tested all of its publicly accessible electric facilities and street lights, as referred to in the body of the February 15 Report, and

- Inspected the requisite number of electric facilities.

The certifications are attached as Exhibit 1 of this report.

VIII. Analysis of Causes of Findings and Contact Voltage

All New York State utilities prepare an inventory of all Findings and report on the number of these Findings each year. Section 1(f) of the Safety Standards defines a Finding as "[a]ny confirmed voltage reading on an electric facility or streetlight greater than or equal to 1 volt measured using a volt meter and 500 ohm shunt resistor." Section 1(c) defines Stray Voltage (referred to herein as Contact Voltage) as "[v]oltage conditions on electric facilities that should not ordinarily exist. These conditions may be due to one or more factors, including, but not limited to, damaged cables, deteriorated, frayed, or missing insulation, improper maintenance, or improper installation."

Although not all findings are due to contact voltage, NYS Utilities are required to report on all findings, regardless of whether or not the voltage is normal to the operating system. In 2010, 4,717 sources of contact voltage were found as a result of all methods of detections; approximately 92% of these findings were detected by the Mobile Contact Voltage Testing Program.

In accordance with the Safety Standards requirements, when a finding is discovered on an electric facility or streetlight during manual contact voltage testing, the Company performs contact voltage testing on all publicly accessible structures, streetlights and sidewalks within a minimum 30 foot radius of the electric facility or streetlight. Of the 305 findings identified by manual contact voltage testing and mitigated, 10 were a result of the 30-foot radius testing.

Contact voltage findings resulted from a variety of conditions including deterioration of conductors and insulation, damaged neutrals and connections, and defective customer equipment. The following table contains a breakdown of the 2010 causes of contact voltage findings that were Con Edison responsibility:

2010 Contact Voltage Finding by Source Con Edison Responsibility	
Source of Contact Voltage	**Con Ed**
Service	364
Streetlight Service	196
Streetlight Con Edison Neutral	466
Main	236
Secondary Burnout	112
Service Con Edison Neutral	181
Crab	83
Main Con Edison Neutral	82
Abandoned Service	38
Sump Pump	42
Abandoned SL Service	21
Overhead Streetlight Service Neutral	11
Corroded Riser	8
Overhead Service	14
Overhead Service Neutral	10
Overhead Streetlight Service	10
Shunt	3
Overhead Secondary	1
Defective Transformer Equipment	1
Overhead Primary	2
Defective Riser Bonding	2
Total	**1883**

The following table contains a breakdown of the 2010 causes of contact voltage findings that were the responsibility of entities other than Con Edison ("Non Con Edison Responsibility"):

2010 Contact Voltage Finding by Source – Non Con Edison Responsibility	
Source of Contact Voltage	**Non Con Edison**
Defective Customer Equipment	553
Defective Contractor Equipment	31
Defective Pigtail	1
Dept. of Transportation (DOT) Streetlight Neutral	1362
Internal City Streetlight Wiring	832
Loose Connection at Lamp Base	34
Open Ended Control Wiring	13
Contractor or Customer Damage	8
Total	**2834**

Mitigation through Detection

Four factors affect the likelihood that a member of the public or animal could experience a shock, referred to here as Electric Shock Reports (ESRs). These factors are the number of energized structures (ENEs), the duration of a mobile system scan, the voltage levels associated with the ENEs, and the population density. A table containing the breakdown of ESRs reported to Con Edison during 2010 can be found in Appendix 3.

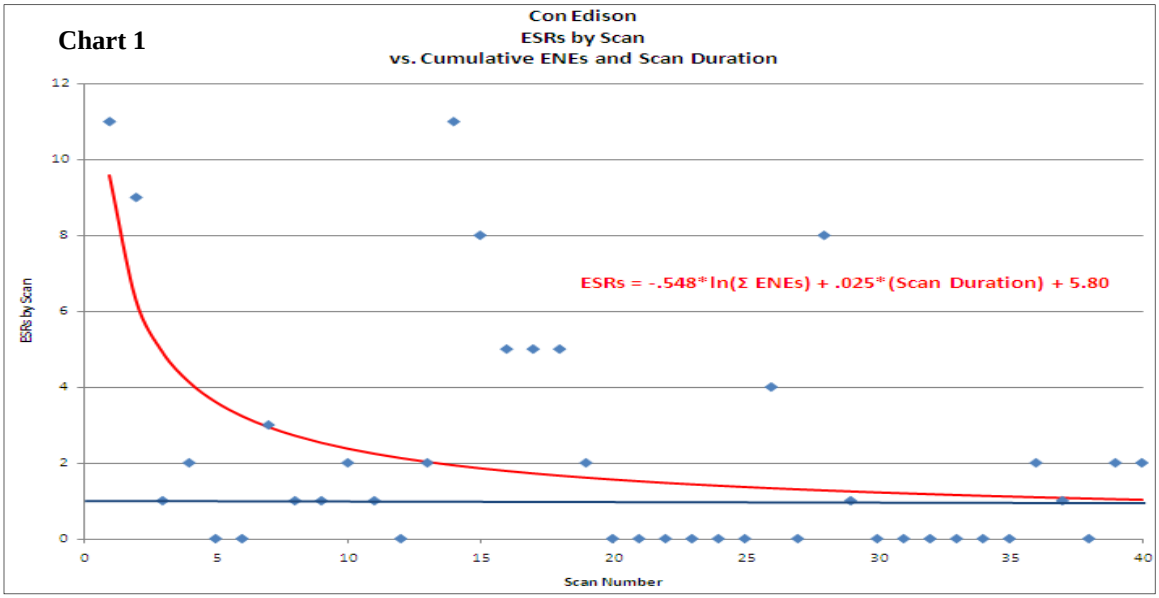
Since the likelihood of an ESR will increase or decrease in proportion to the total number of energized structures, the detection and repair of identified sources of contact voltage is the principal mitigation effort for reducing ESRs. Each completed repair effectively represents a mitigation of possible ESRs. As these repairs accumulate over time, the potential ESRs decrease accordingly.

Additionally, conducting more mobile system scans annually has the positive effect of reducing the possibility of a member of the public or animal coming in contact with an energized structure because more contact voltage conditions would be detected and mitigated.

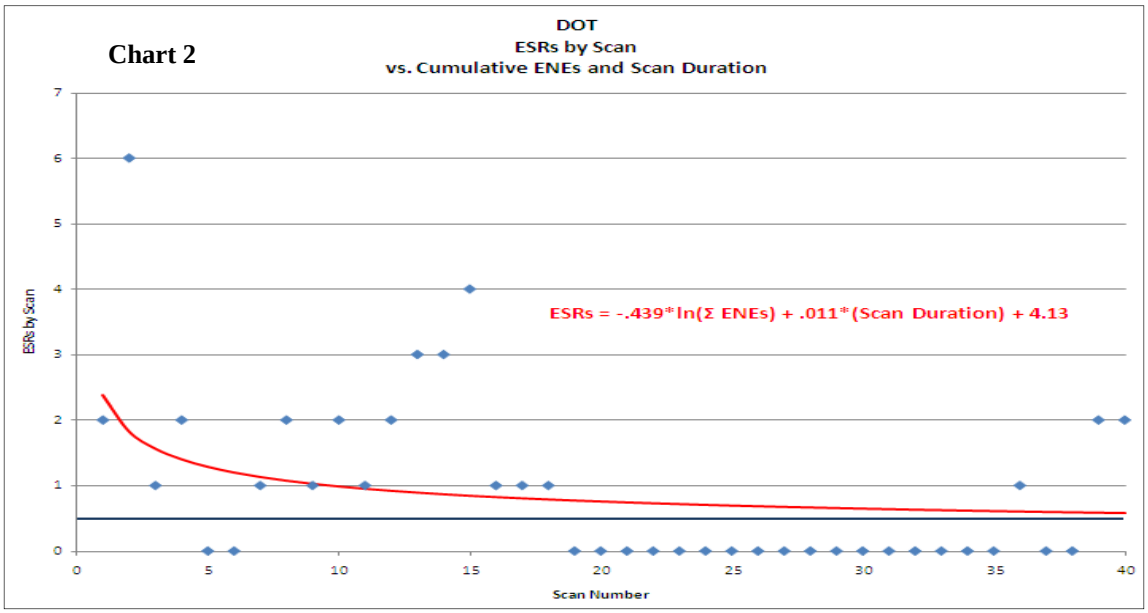
Although both ENE voltage levels and population density are recognized as contributory factors in ESR occurrences, these two factors are not subject to control such that they can be meaningfully incorporated into ESR or Generation Rate analyses.

Based on these considerations, the following analyses demonstrate the reduction in ESRs realized through continued ENE elimination. A separate analysis is carried out for each of the three major system elements that could contribute to an ESR: Con Edison, DOT, and Customer Equipment (Public Access).

The reduction of ESRs associated with Con Edison's equipment appears on Chart 1. The duration of scans is 30-35 days per scan. If we continue a comparable ENE repair rate and scan duration in 2011, we can expect ESRs at this scan duration level to fall to approximately 1 per scan. This prediction is consistent with the 2010 actual results of 15 shocks due to Con Edison responsibility.

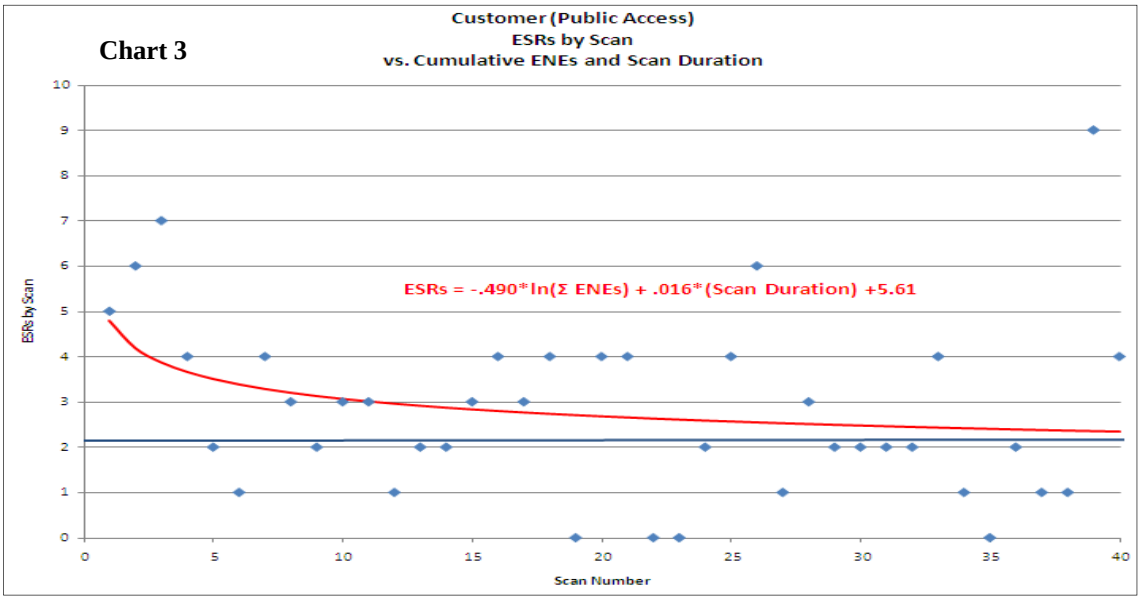


The reduction of ESRs associated with the DOT appears on Chart 2. The duration of scans is 30-35 days per scan. If we continue a comparable ENE repair rate and scan duration in 2011, we can expect ESRs at this scan duration level to be approximately 1 every two scans. This demonstrates marginal improvement over current scan durations. In 2010 there was 1 shock associated with DOT equipment failures. This result is better than predicted, and is likely the result of various programs implemented by both DOT and Con Edison to mitigate shocks.



The reduction of ESRs associated with Customer Equipment (Public Access) appears on Chart 3. The duration of scans is 30-35 days per scan. If we continue

a comparable ENE repair rate and scan duration in 2011, we can expect ESRs to remain at 2 per scan with no significant reduction anticipated below that level in the near future. These ESRs appear essentially insensitive to changes in scan duration at this point in time. The actual performance indicates that these shock events are less sensitive to our mitigation efforts then we initially projected. In 2010, we responded to 43 validated shock reports on publicly accessible customer equipment, this is 32 % higher than predicted by the model.



IX. Analysis of Inspection Results

Inspection Breakdown

Facility Inspection Program	2010	2011	2012	2013	2014	5-Year Cumulative Unique Inspections	Percent Completed
Distribution - Underground/URD	47,017					47,017	16.92%
Distribution - Overhead	85,124					85,124	31.47%
Transmission – Underground*	542					542	25.12%
Transmission - Overhead	1212					1,212	100.00%
Substations	23					23	22.77%
PURS Facilities	3					3	27.27%
Unit Substations	243					243	100.00%
Total	134,164	0	0	0	0	134,164	24.30%

*Gross inspections performed. Con Edison inspects its underground transmission system at multiple intervals, all less than 5 years. The data above captures all inspections performed.

Overhead Distribution Structures

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
85,124	12,715	14.94%

*Breakdown of Locations with Deficiencies***

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	63	0.24%
2	2,128	7.97%
3	11,959	44.79%
4	12,553	47.01%
Total:	26,703	100.00%

Overhead Transmission Facilities

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
1212	180	15%

*Breakdown of Locations with Deficiencies***

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	2	0.16%
2	82	6.66%
3	112	9.10%
4	1035	84.08%
Total:	1231	100.00%

Underground Distribution and URD Facilities

Table of Locations with Deficiencies

Locations Inspected	Locations w/ Deficiencies	% Locations w/ Deficiencies
47,017	21,376	45%

*Breakdown of Locations with Deficiencies***

Priority Rating	Number of Deficiencies	% Deficiencies Found
1	20,626	21%
2	8,200	8%
3	15,796	16%
4	52,540	54%
Total:	97,162	100%

** Locations may have multiple deficiencies.

Streetlights

Con Edison does not own streetlight facilities. Streetlight facilities in the Company's service area are owned by the City of New York and municipalities located in Westchester County

Repair of Deficiencies

During 2010, the company repaired 98% of the Level I's defects found, 59% of the Level II's defects found, 18% of the Level III's defects found and 10% of the level IV's defects found during 2010. Thus, 63% of the defects found in 2010 were repaired in 2010. A correction has been made to Level 1 repairs identified in 2009 in Appendix 4 of this report. In 2009, the database associated with our Safety Inspection Program (EDIS) captured and reported as found in 2009 all Level 1 defects found prior to 2010. The report now reflects Level 1 repairs found only in 2009. All these repairs are completed.[2]As of January 1, 2010, a total of 316 Level 1 repairs identified in 2010 were reported as open and overdue in the Underground, Overhead, and URD programs. The largest portion of those repairs is in our Underground Program (307 repairs). 296 of the 307 repairs reflected as overdue and open in our Underground Program deal with structure damage. This was created by a specification change which allows the inspector to classify structure damage repairs into two categories (Level 1 repair or Level 4 repair) based on severity. We are currently re-fielding these Level 1 repairs to make sure they were properly identified and if so make repairs. We are doing the same for the 9 Level 1 repairs reported as open and overdue associated with our Overhead Program and URD Program

As of February 11, 2011, 229 Level 1 are reported as open and overdue in the Underground, Overhead, and URD programs. These include 224 of repairs associated with the Underground Program, with 222 of those repairs dealing with structure damage.

As of January 1, 2010, a total of 608 level 2 repairs identified in 2010 were reported as open and overdue in the Underground, Overhead, and URD programs. As of February 11, 2011, 348 Level 2 repairs identified in 2010 in the Underground, Overhead, and URD programs were reported as open and overdue with the majority being in our URD Program. We are in the process of making these repairs.

[2] Our database associated with our URD program identified 10 Level 1 repairs open from 2009. Upon reviewing these repairs, most appear to be completed in the field, but are not reflected as closed in our database. We are having field forces re-inspect these units to ensure completion. The majority of these repairs are either locks not installed or concentric neutrals not connected.

Temporary Repairs

Our inspection database, identifies temporary repairs that have remained in place more than 90 days as shown in the following chart:

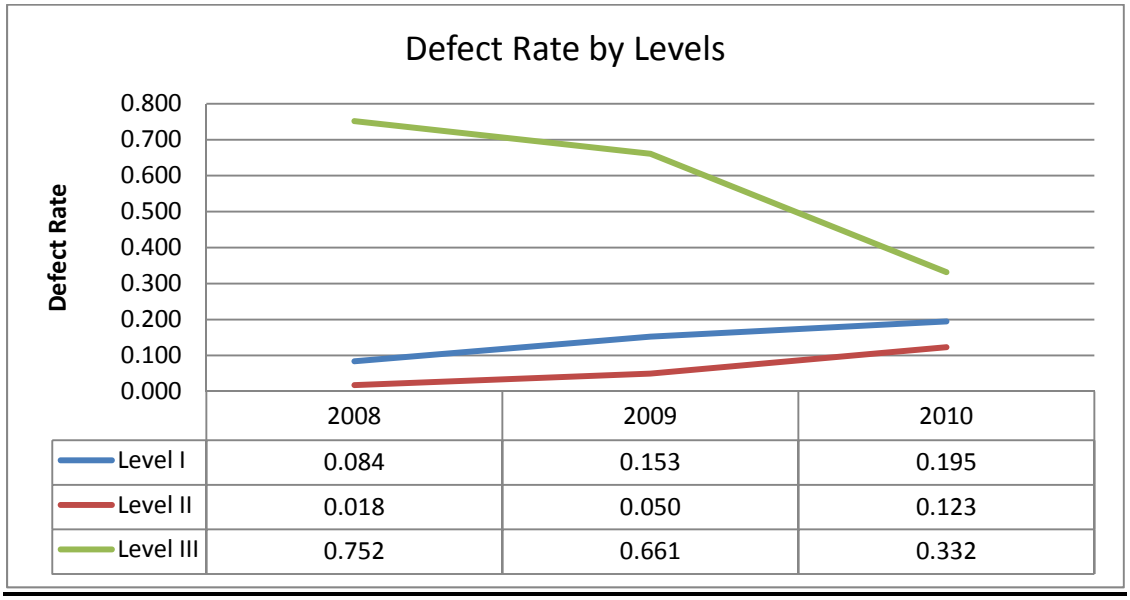
	Level I	Level II	Level III
Underground Distribution	0	205	181
Overhead Distribution	2	1	3
URD	12	8	0

There are two Level I temporary repairs on the overhead system, both are leaking aerial joints that have been "bagged" to prevent them from leaking. These sections of aerial cable are now awaiting replacement. The majority of the 12 level I temporary repairs on the URD system are structural defects and transformer off base, these twelve temporary are being scheduled for permanent repairs.

The majority of Level 2 and 3 temporary repairs were made during the first year of the second cycle (2010) prior to the crew leaving the work site. We are in the process of making these repairs permanent within the one and three year periods applicable to correction of Level II and Level III conditions, respectively.

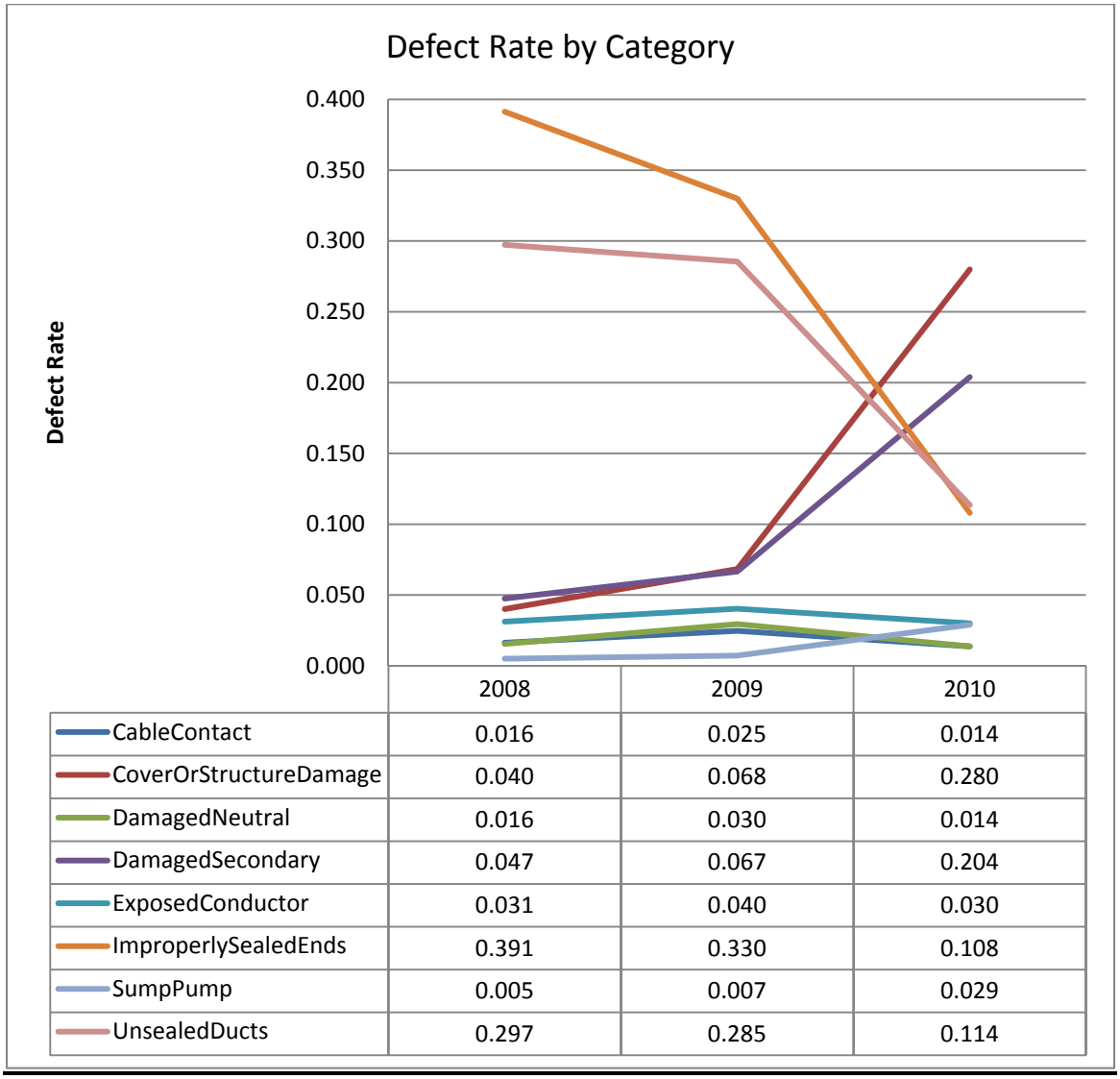
Analysis of Repairs Found

The chart below shows the number of defects found per inspection:



	2008	2009	2010
Level I	0.084	0.153	0.195
Level II	0.018	0.050	0.123
Level III	0.752	0.661	0.332

The defect found ratio can be broken down further, by type of repair:



	2008	2009	2010
CableContact	0.016	0.025	0.014
CoverOrStructureDamage	0.040	0.068	0.280
DamagedNeutral	0.016	0.030	0.014
DamagedSecondary	0.047	0.067	0.204
ExposedConductor	0.031	0.040	0.030
ImproperlySealedEnds	0.391	0.330	0.108
SumpPump	0.005	0.007	0.029
UnsealedDucts	0.297	0.285	0.114

Since 2008, we have made changes to our inspection program, the major change being moving from a tiered structure (prior to 2009) for categorizing repairs to a level based system. In doing so, when comparing 2008 to 2009 and 2010, repair categories do not directly translate to a specific level, which slightly skews our defect ratios. We have grouped these shared repairs (prior to 2009 Tier 2, and after 2009 Level 2 and 3) using our knowledge of and the intent of our specification changes.

For most categories, we see a minor decrease in defect rate from 2009 to 2010. Two categories that we see a major decrease in defect rate are unsealed ducts and improperly sealed ends. In 2009, we included the sealing of ducts and improperly sealed ends as a Level 1 repair. This resulted in a significant reduction of these types of defects being found in 2010 (as shown in the graph above). We also saw an upward spike in a few categories.

During the first 3 years of the prior cycle; cover damage and structure damage was captured in one category. A specification change was made in late 2009 that enabled the inspector to identify these repairs as two separate repairs. This lead to a spike in rate detected during the 2010 program. This also holds true for damaged secondary cable; the rate increase seen in 2010 results from a change in our inspection report form in late 2009 which allows the inspector to report repairs needed to the secondary service, crabs, and removal of split bolt connectors.

In 2010, we also saw an increase in sump pump defects (sump pump not working) found. This can be attributed to vaults that currently have an older model sump pump installed. In 2008, the Company changed the specification when purchasing sump pumps to a model which has a more robust seal system which would extend the life of the pump when cycling. The majority of the failed units identified in the 2010 inspection program were sump pumps of the prior vintage. As we find and remove these older pumps, we are replacing them with the new model.

X. Quality Assurance

The Safety Standards require electric companies to develop a quality assurance program to "ensure timely and proper compliance with these safety standards." Con Edison has developed a comprehensive quality assurance program to address the contact voltage testing and facility inspections requirements. The quality assurance program includes:

- Contact voltage testing of underground distribution structures including Underground Residential Distribution (URD), overhead distribution structures and municipality owned streetlights
- Contact voltage testing of transmission and substation facilities
- Facility inspections of underground distribution, URD, and overhead distribution structures
- Facility inspections of transmission facilities and substation facilities

This section addresses Con Edison's quality assurance program for the aforementioned contact voltage testing and facility inspections.

Quality Assurance Measures Instituted: Contact Voltage Testing of Underground Distribution Structures, Overhead Distribution Structures, and Municipality Owned Streetlights

Con Edison developed a quality assurance plan to ensure that contact voltage testing was performed as specified. The reliability and error design parameters used were:

> *95% reliability within a ±10% relative precision level and satisfy established industry sample design criteria.*

1200 quality assurance checks are required to achieve a 95% confidence rate with a ±10% overall error that the contact voltage tests were conducted in accordance with Company specifications.

Specification EO-10315 (Quality Assurance of the Contact (Stray) Voltage and Periodic Distribution Structure Safety Inspection Programs) calls for 1200 quality assurance checks to be performed on the contractor contact voltage testing. The quality assurance checks are randomly selected from a database of all contact voltage tests and includes a field test for contact voltage. Con Edison performed 400 quality assurance checks of the underground distribution structures including underground residential distribution (URD), 400 quality assurance checks of overhead distribution structures and 400 quality assurance checks of municipality owned streetlights. Contact voltage was not found during any of these quality assurance reviews. In addition to the 1200 quality assurance checks discussed above, Con Edison also conducted Random Quality Assurance reviews of "work in progress."

Quality Assurance Measures Instituted: Contact Voltage Testing of Transmission and Substation Facilities

In accordance with CE-ES-1043, a planner in Transmission Line Maintenance who has knowledge and expertise in overhead transmission, but who did not perform or directly supervise the contact voltage testing, conducted quality assurance inspections at locations on various transmission lines for overhead transmission facilities. Contact voltage was not found during any of these quality assurance reviews

Con Edison performed several types of quality assurance on the underground transmission contact voltage-testing program. Contractors, who also performed testing on underground distribution structures, performed the contact voltage testing of underground transmission facilities. Following this contact voltage testing, Con Edison Construction Management personnel performed audits at several locations. Contact voltage was not found during any of these quality assurance reviews

Substations Operations Methods and Procedures group performed quality assurance for the substation contact voltage-testing program. The quality assurance consisted of a documents search, records review, as well as physical contact voltage testing. Separate records were created for each quality assurance audit. Contact voltage was not found during any of these quality assurance reviews

Quality Assurance performed a quality review on a randomly selected sample of unit substations. Contact voltage was not found during any of these quality assurance reviews

These QA checks confirmed the accuracy of the results from the Contact voltage-testing program.

Quality Assurance Measures Instituted: Inspections of Underground Distribution Structures and Overhead Distribution Structures

A Central Quality Assurance group (QA) was established to oversee work done on the underground electrical system. QA observes specification compliance of the underground inspection program. EO-10315 (Quality Assurance of the Contact Voltage and Periodic Distribution Structure Safety Inspection Programs) establishes standards for the QA program in order to ensure that the underground structure inspections are performed in accordance with the Safety Standards and Con Edison's specifications. The reliability and error design parameters used were:

95% reliability within a ±10% relative precision level and satisfy established industry sample design criteria.

800 quality assurance checks are required to achieve a 95% confidence rate with a ±10% overall error that the inspections were conducted in accordance with Company specifications.

Con Edison employees from the centralized quality assurance department conduct the quality assurance for each of the Company's operating regions. These employees are experienced cable splicers, linemen and mechanics that have been trained in facility inspection and the quality assurance specifications.

The quality assurance personnel performed a complete re-inspection of 400 underground and 400 overhead faculties. The results of the randomly selected facilities are compared with the results to the previous inspected facilities. Deficiencies identified during quality assurance reviews are communicated to field crews, supervisors, planners, and managers who have been required to reinforce inspection procedures with field crews.

Quality Assurance Measures Instituted: Transmission and Substation Facility Inspections

Company specifications CE-SS-6830 (Low and Medium Feeder Pressure Periodic Inspection Procedure) and CE-SS-6045 (Inspection and Preventive Maintenance and Contact Voltage Testing of Pipe Type Cable Systems) require that quality assurance inspections of randomly selected transmission manholes be performed. These randomly selected manholes are re-inspected or re-tested by trained and knowledgeable employees who did not perform or directly supervise this work.

Substation Operations' quality assurance program consists of periodic document reviews and field observations to ensure that 100% of the required contact voltage tests and a minimum of 20% of the Safety and Reliability Inspections of Substation facilities will be completed by December 31 of each year and that the testing and inspections are properly conducted.

Quality assurance was performed by members of the SSO Methods and Procedures group and consisted of a documents search, records review, and physical critical visual inspection. Critical visual inspection quality assurance was performed. Separate inspection records were created for each quality assurance audit. In addition, all inspection and follow-up work order documentation was reviewed. Work orders are entered into our work management system and processed by appropriate personnel. These work orders are tracked closely until all repairs are completed. All personnel are trained on proper reporting and referral of repairs identified during facility inspections. The quality assurance inspections yielded results indicating that the original inspections were performed in accordance with the applicable specifications.

XI. Other Pertinent Information

In 2010 Con Edison contracted Columbia University Center for Computer Learning to perform an analysis of the impact of the Inspection program on secondary events. The study was performed on a representative subset of approximately 52,000 structures. The researchers at Colombia University grouped the structures into 8 categories based on attributes of the structure. The categories are as follows:

Category 1:

- Top 5000 ranked structures in the targeting model (9.57% of structures)
- Consists of 1,189 manholes and 3,811 service boxes
- Average number of cables per manhole is 81.72 (versus 38.27 overall)
- Average number of cables per service box is 47.45 (versus 23.16 overall)

Category 2:

- Manholes with more than 70 cables, except those in Category 1 (N=2,136; 4.09% of structures)
- Consists of manholes within rank 5001-39566 of targeting model, hence none appear in the bottom 24.3% of the targeting model
- Statistically significant impact, and large effect, of Level 1 repairs in reducing likelihood of future events, in contrast to other manholes
- Lower rate of clean inspections(inspections with no repairs or follow up repairs reported) than other manholes

Category 3:

- Service boxes with 21 to 30 cables, and with service phase cables, and with no service cables installed in the 60s, except those in Category 1 (N=6200; 11.86% of structures)
- Relatively low rate of clean inspections
- Statistically significant impact, and modest effect, of Level 1 repairs in reducing likelihood of future events; a greater effect than for other service boxes with 21-30 cables

Category 4:

- Service boxes with 21 to 30 cables, and either no service phase cables or service phase cables and service cables installed in the 60s, except those in Category 1 (N=3,715; 7.11%), and**:** Service boxes with 30 to 50 cables, not in Category 1 (N=4450; 8.51%). Combined total: 8,165 structures; 15.62%
- Lower rate of clean inspections, and less strong effect of Level 1 repairs, than for other service boxes with 21 to 30 cables, or 30-50 cables

Category 5:

- Service boxes with 1 to 20 cables, and with service phase cables, and with no service cables installed in the 60s, except those in Category 1 (N=8,303; 15.89% of structures)
- Lowest rate of clean inspections (24.15%; probably a one-time effect)
- Statistically significant, but modest effect, of Level 1 repairs in reducing likelihood of future events (probably a one-time effect); a greater effect than for other service boxes with 1-20 cables

Category 6:

- Service boxes with 1 to 20 cables, and either no service phase cables or service phase cables and service cables installed in the 60s, not in Category 1 (N=9,201; 17.60%)
- Lower rate of clean inspections, and less strong effect of Level 1 repairs, than for other service boxes with 1 to 20 cables

Category 7:

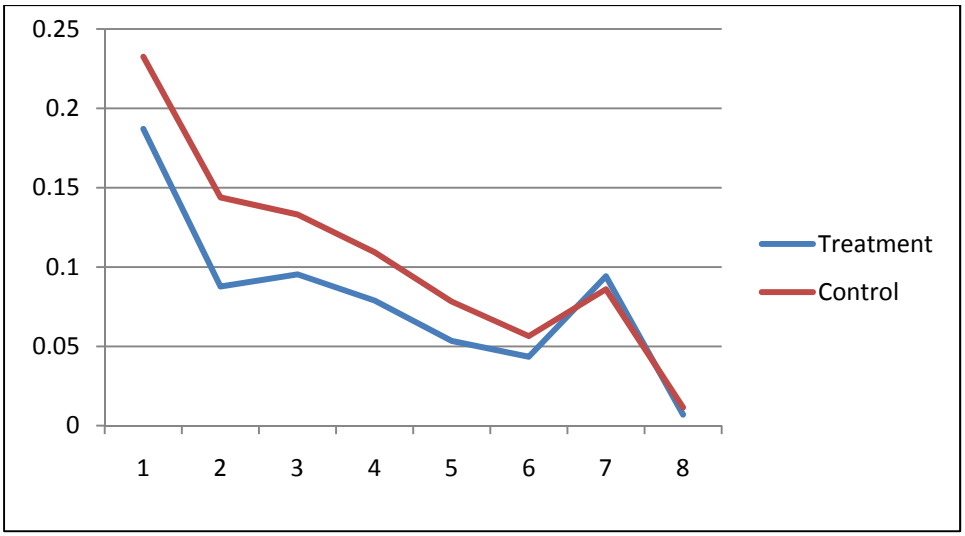
- Service boxes with more than 50 cables, not in Category 1 (N=258; 0.5% of structures)
- Lower rate of clean inspections than manholes, higher than other service boxes
- No significant impact of Level 1 repairs in reducing likelihood of future events.
- Manholes with 1 to 69 cables, not in Category 1 (N=8,316; 15.91%)
- No significant impact of Level 1 repairs in reducing likelihood of future events and manholes with 1 to 69 cables, not in Category 1 (N=8,316; 15.91%)
- High rate of clean inspections

Category 8:

- Manholes and service boxes with no secondary cable (N=4,689; 8.97% of all structures)
- No significant impact of Level 1 repairs on reducing future incidence of events
- High rate of clean inspections

They then considered the relative risk of an event occurring in control and treatment groups. The treatment group was a subset of the data which had been inspected.

The conclusion of the study was that, as a result of the inspection program approximately 1,300 events across all 8 categories were avoided over a 5 year period. Of the 1,300 events approximately 200 were smoking manholes. The remaining 1,100 events were other secondary conditions such as flickering lights, energized objects, etc. The study did not detect a reduction in manhole fires and explosions as a result of the inspection program.



The benefit derived from the inspection of the 52,000 structures studied was a reduction in probability between the treatment group (blue) and the control group (red) of about 5% for categories 1, 2 and 3 with less of an impact on categories 4,5, and 6. Categories 7 and 8 showed no significant impact. This translates to a reduction of approximately 1300 secondary events from the inspection of 52,000 structures.

Using this new data, we are examining ways to optimize our testing and inspection programs to minimize cost and maximize our impact on public safety.. For example, from a cost benefit perspective, the average cost per structure inspection (assuming that 50% of the structures in a given cycle are targeted) is ten times more than the cost per ENE detected by way of using our mobile detection technology. This implies that using our mobile technology effectively can detect ENEs which can lead to underground secondary events at a substantially lower cost than our current inspection programs. We are examining the use of increased mobile scanning coupled with decreased inspections, as a way of optimizing the cost benefits of our mobile scan versus our targeted inspection programs as a way to increase public safety and maximize cost savings.

On February 17, 2010, L-3 Communications, Narda Microwave-East (Narda) formally performed testing on a newly developed mobile contact voltage device, the 8950 System. Under the observation of Underwriter Laboratories (UL), this new device was reported to have the capabilities of detecting contact voltage greater than 2 VAC, at distances of up to 20 feet and at a speed of up to 25 mph.

Con Edison purchased several units for evaluation. Data collected will be used for comparative analysis between the capability of this new device and that of our present mobile technology. To date, we have not incorporated these units into our mobile contact voltage testing program because we have not been able to achieve results similar to that of the existing mobile detection technology. We are continuing to work with the manufacture and EPRI to improve this device.

In late 2009, Con Edison began using hand-held oscilloscopes to take 3rd harmonic measurements as a diagnostic method. High 3rd harmonic content is associated with non-linear loads. Studies have indicated the 3rd harmonic contents of energized objects due to contact voltage is usually less than 10% for secondary phase faults and greater than 10% for secondary neutral faults. The harmonic byproduct distorts the waveform and causes harmonic voltages to travel back through other parts of a power distribution system, such as the neutrals. This information is used to assist crews in mitigating contact voltage. We have taken this technology even further. In conjunction with EPRI and a technology manufacturer, Con Edison is testing a more user friendly prototype of the

oscilloscope. This new tool will be a simplified version using LED lights to indicate secondary low voltage neutral or phase faults.

Appendix 1: Summary of Contact Voltage Testing

	Total System Units Requiring Testing	Units Completed	Percent Completed	Units with Voltage Found (>= 1.0v)	Percent of Units Tested with Voltage (>= 1.0v)	Units Classified as Inaccessible
Distribution Facilities	283,859	284,637	100.27%	17	0.006%	3,646
Yearly Update	283,859	284,637	100.27%	17	0.006%	
Underground Facilities	163,637	163,844	100.13%	1	0.001%	3,237
Yearly Update	163,637	163,844	100.13%	1	0.001%	
Street Lights / Traffic Signals	120,273	120,534	100.22%	285	0.236%	245
Yearly Update	120,273	120,534	100.22%	285	0.236%	
Asset Tested Mobile	175,291	175,291	100.00%	416	0.237%	0
Yearly Update	175,291	175,291	100.00%	416		
Substation Fences	392	392	100.00%	3	0.765%	0
Yearly Update	392	392	100.00%	3	0.765%	
Transmission (69kV and Above)	1,329	1,329	100.00%	0	0.000%	0
Yearly Update	1,329	1,329	100.00%	0		
TOTAL	744,781	746,027	100.17%	722	0.000%	7,128
Yearly Update	744,781	746,027	100.17%	722	0.000%	0

Appendix 2a : Summary of Energized Objects - Mobile Testing

conEdison, inc.

	2010 Year				Jan 1, 2010 - Dec 31, 2010		
	Initial Readings				Readings after Mitigation		
	1.0V - 4.4V	4.5V - 24.9V	> 25 V	Totals	<1.0V	1.0V - 4.4V	> 4.5V
Distribution Facilities	11	5	0	16	16	0	0
Pole	8	4	0	12	12	0	0
Ground	0	0	0	0	0	0	0
Guy	2	0	0	2	2	0	0
Riser	0	0	0	0	0	0	0
Other	1	1	0	2	2	0	0
Underground Facilities	388	133	26	547	547	0	0
Service Box	25	7	1	33	33	0	0
Manhole	362	125	25	512	512	0	0
Padmount Switchgear	0	0	0	0	0	0	0
Padmount Transformer	0	0	0	0	0	0	0
Vault – Cover/Door	1	1	0	2	2	0	0
Pedestal	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Street Lights / Traffic Signals	2,011	783	325	3,119	3,119	0	0
Metal Street Light Pole	624	393	261	1,278	1278	0	0
Traffic Signal Pole	1271	349	54	1,674	1674	0	0
Traffic Control Box	23	5	1	29	29	0	0
Pedestrian Crossing Pole	92	34	9	135	135	0	0
Other	1	2	0	3	3	0	0
Substation Fences	0	0	0	0	0	0	0
Fence	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Transmission (Total)	0	0	0	0	0	0	0
Lattice Tower	0	0	0	0	0	0	0
Pole	0	0	0	0	0	0	0
Ground	0	0	0	0	0	0	0
Guy	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Miscellaneous Facilities	3,539	1,498	387	5,424	5424	0	0
Sidewalk	18	13	2	33	33	0	0
Gate/Fence/Awning	858	405	130	1,393	1393	0	0
Traffic Sign	242	101	20	363	363	0	0
Scaffolding	68	17	18	103	103	0	0
Bus Shelter	26	31	2	59	59	0	0
Fire Hydrant	92	24	1	117	117	0	0
Phone Booth	6	2	1	9	9	0	0
Control Box	6	1	0	7	7	0	0
Water Pipe	2	0	0	2	2	0	0
Riser	0	0	0	0	0	0	0
Other	2221	904	213	3,338	3338	0	0
Totals	5,949	2,419	738	9,106	9,106	0	0

Data collected through December 31, 2010

Appendix 2b: Summary of Energized Objects* - Manual Testing + Other

conEdison, inc.

	2010 Year						
	Initial Readings				Readings after Mitigation		
	1.0V - 4.4V	4.5V - 24.9V	> 25 V	Totals	<1.0V	1.0V - 4.4V	> 4.5V
Distribution Facilities	9	4	6	19	19	0	0
Pole	3	3	3	9	9	0	0
Ground	0	0	0	0	0	0	0
Guy	2	0	0	2	2	0	0
Riser	4	1	3	8	8	0	0
Other	0	0	0	0	0	0	0
Underground Facilities	5	4	7	16	16	0	0
Service Box	4	2	0	6	6	0	0
Manhole	1	1	1	3	3	0	0
Padmount Switchgear	0	0	0	0	0	0	0
Padmount Transformer	0	0	0	0	0	0	0
Vault – Cover/Door	0	1	4	5	5	0	0
Pedestal	0	0	1	1	1	0	0
Other	0	0	1	1	1	0	0
Street Lights / Traffic Signals	93	183	74	350	350	0	0
Metal Street Light Pole	43	98	58	199	199	0	0
Traffic Signal Pole	41	60	8	109	109	0	0
Traffic Control Box	0	6	1	7	7	0	0
Pedestrian Crossing Pole	9	19	7	35	35	0	0
Other	0	0	0	0	0	0	0
Substation Fences	1	2	0	3	3	0	0
Fence	1	2	0	3	3	0	0
Other	0	0	0	0	0	0	0
Transmission (Total)	3	0	0	3	0	3	0
Lattice Tower	3	0	0	3	0	3	0
Pole	0	0	0	0	0	0	0
Ground	0	0	0	0	0	0	0
Guy	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Miscellaneous Facilities	24	19	13	56	56	0	0
Sidewalk	0	0	0	0	0	0	0
Gate/Fence/Awning	1	2	2	5	5	0	0
Traffic Sign	0	1	0	1	1	0	0
Scaffolding	2	0	0	2	2	0	0
Bus Shelter	1	0	0	1	1	0	0
Fire Hydrant	2	0	0	2	2	0	0
Phone Booth	0	0	0	0	0	0	0
Control Box	0	0	0	0	0	0	0
Water Pipe	0	1	1	2	2	0	0
Riser	0	0	2	2	2	0	0
Other	18	15	8	41	41	0	0
Totals	135	212	100	447	444	3	0

Data collected through December 31, 2010

Appendix 3 : Summary of Shock Reports from the Public		
2010	**Quarterly Update** Oct 1, 2010 - Dec 31, 2010	**Yearly Total**
I. Total shock calls received:	**33**	**178**
Unsubstantiated	18	106
Normally Energized Equipment	1	13
Substantiated Stray Voltage	14	59
Details of Substantiated Stray Voltage Events :		
# of Persons	8	42
# of Animals*	6	18
II. Injuries Sustained	**0**	**0**
Utility Responsibility :		
Person	0	0
Animal	0	0
Non Utility Responsibility :		
Person	0	0
Animal	0	0
Unsubstantiated :		
Person	0	0
Animal	0	0
III. Medical Attention Received	**2**	**11**
Utility Responsibility :		
Person	0	1
Animal	0	0
Non Utility Responsibility :		
Person	0	1
Animal	0	0
Unsubstantiated :		
Person	2	8
Animal	0	1
IV. Voltage Source:	**13**	**58**
Utility Responsibility :		
Issue with primary, joint, or transformer	0	0
Secondary joint (Crab)	1	2
SL service Line	0	1
Abandoned SL service line	0	0
Defective service line	0	2
Abandoned service line	2	9
OH Secondary	1	1
OH Service	0	0
OH Service neutral	0	0
OH SL Service	0	0
OH SL Service neutral	0	0
Pole	0	0
Riser	0	0
Other	0	0
Customer Responsibility :		
Contractor damage	1	5
Customer equipment/wiring	7	37
Other Utility/Gov't Agency Responsibility :		
SL Base Connection	0	0
SL Internal wiring or light fixture	1	1
Overhead equipment	0	0
V. Voltage Range:	**14**	**59**
1.0V to 4.4V	2	6
4.5V to 24.9V	6	19
25V and above	6	34
No Reading	0	0

Data collected through December 31, 2010

*2 Animals were shocked in one event

Appendix 4 : Summary of Deficiencies and Repair Activity Resulting from the Inspection Process

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Distribution															
Overhead Facilities	**2009**			**2010**			**2011**			**2012**			**2013**		
Priority Level	**I**	**II**	**III**	**I**	**II**	**III**	**I**	**II**	**III**	**I**	**II**	**III**	**I**	**II**	**III**
Repair Expected	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**	**Within 1 week**	**Within 1 year**	**Within 3 years**
Poles															
Pole Condition															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Grounding System															
Number of Deficiencies			**4,272**			**5,130**									
Repaired in Time Frame			**3,822**			**67**									
Repaired - Overdue			**0**			**0**									
Not Repaired - Not Due			**450**			**5,063**									
Not Repaired - Overdue			**0**			**0**									
Anchors/Guy Wire															
Number of Deficiencies			**34**			**391**									
Repaired in Time Frame			**12**			**5**									
Repaired - Overdue			**0**			**0**									
Not Repaired - Not Due			**22**			**386**									
Not Repaired - Overdue			**0**			**0**									
Cross Arm/Bracing															
Number of Deficiencies		**123**			**435**										
Repaired in Time Frame		**118**			**25**										
Repaired - Overdue		**1**			**0**										
Not Repaired - Not Due		**0**			**410**										
Not Repaired - Overdue		**4**			**0**										
Riser															
Number of Deficiencies			**617**			**731**									
Repaired in Time Frame			**588**			**3**									
Repaired - Overdue			**0**			**0**									
Not Repaired - Not Due			**29**			**728**									
Not Repaired - Overdue			**0**			**0**									

Conductors															
Primary Wire/Broken Ties															
Number of Deficiencies	**3**	**337**	**4,862**	**27**	**1,189**	**5,033**									
Repaired in Time Frame	**3**	**274**	**4,135**	**5**	**319**	**622**									
Repaired - Overdue	**0**	**55**	**0**	**16**	**0**	**0**									
Not Repaired - Not Due	**0**	**0**	**727**	**0**	**870**	**4,411**									
Not Repaired - Overdue	**0**	**8**	**0**	**6**	**0**	**0**									
Secondary Wire															
Number of Deficiencies			**29**			**548**									
Repaired in Time Frame			**26**			**17**									
Repaired - Overdue			**0**			**0**									
Not Repaired - Not Due			**3**			**531**									
Not Repaired - Overdue			**0**			**0**									
Neutral															
Number of Deficiencies		**185**			**19**										
Repaired in Time Frame		**185**			**5**										
Repaired - Overdue		**0**			**0**										
Not Repaired - Not Due		**0**			**14**										
Not Repaired - Overdue		**0**			**0**										
Insulators															
Number of Deficiencies		**108**			**414**										
Repaired in Time Frame		**107**			**42**										
Repaired - Overdue		**0**			**0**										
Not Repaired - Not Due		**0**			**372**										
Not Repaired - Overdue		**1**			**0**										
Pole Equipment															
Transformers															
Number of Deficiencies	**4**			**33**											
Repaired in Time Frame	**3**			**18**											
Repaired - Overdue	**1**			**14**											
Not Repaired - Not Due	**0**			**0**											
Not Repaired - Overdue	**0**			**1**											
Cutouts															
Number of Deficiencies				**3**											
Repaired in Time Frame				**1**											
Repaired - Overdue				**2**											
Not Repaired - Not Due				**0**											
Not Repaired - Overdue				**0**											

Lightning Arrestors																
Number of Deficiencies		**33**			**71**											
Repaired in Time Frame		**33**			**3**											
Repaired - Overdue		**0**			**0**											
Not Repaired - Not Due		**0**			**68**											
Not Repaired - Overdue		**0**			**0**											
Other Equipment																
Number of Deficiencies			**95**			**126**										
Repaired in Time Frame			**70**			**13**										
Repaired - Overdue			**0**			**0**										
Not Repaired - Not Due			**25**			**113**										
Not Repaired - Overdue			**0**			**0**										
Miscellaneous																
Trimming Related																
Number of Deficiencies																
Repaired in Time Frame																
Repaired - Overdue																
Not Repaired - Not Due																
Not Repaired - Overdue																
Other																
Number of Deficiencies		**1,293**														
Repaired in Time Frame		**1,293**														
Repaired - Overdue		**0**														
Not Repaired - Not Due		**0**														
Not Repaired - Overdue		**0**														
Overhead Facilities Total																
Total																
Number of Deficiencies	**7**	**2,079**	**9,909**	**63**	**2,128**	**11,959**										
Repaired in Time Frame	**6**	**2,010**	**8,653**	**24**	**394**	**727**										
Repaired - Overdue	**1**	**56**	**0**	**32**	**0**	**0**										
Not Repaired - Not Due	**0**	**0**	**1,256**	**0**	**1,734**	**11,232**										
Not Repaired - Overdue	**0**	**13**	**0**	**7**	**0**	**0**										

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Transmission

Transmission Facilities	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Towers/Poles															
Steel Towers															
Number of Deficiencies			**41**			**42**									
Repaired in Time Frame			**25**			**42**									
Repaired - Overdue															
Not Repaired - Not Due			**16**												
Not Repaired - Overdue															
Poles															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Anchors/Guy Wire															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Crossarm/Brace															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Grounding System															
Number of Deficiencies		**51**			**60**										
Repaired in Time Frame		**51**			**60**										
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Conductors																
Cable																
Number of Deficiencies																
Repaired in Time Frame																
Repaired - Overdue																
Not Repaired - Not Due																
Not Repaired - Overdue																
Static/Neutral																
Number of Deficiencies	**1**			**1**												
Repaired in Time Frame	**1**			**1**												
Repaired - Overdue																
Not Repaired - Not Due																
Not Repaired - Overdue																
Insulator																
Number of Deficiencies			**17**	**1**		**17**										
Repaired in Time Frame			**17**	**1**		**17**										
Repaired - Overdue																
Not Repaired - Not Due																
Not Repaired - Overdue																
Miscellaneous																
Right of Way Condition																
Number of Deficiencies		**18**			**20**	**39**										
Repaired in Time Frame		**18**			**20**	**39**										
Repaired - Overdue																
Not Repaired - Not Due																
Not Repaired - Overdue																
Other																
Number of Deficiencies					**2**	**14**										
Repaired in Time Frame					**2**	**14**										
Repaired - Overdue																
Not Repaired - Not Due																
Not Repaired - Overdue																
Transmission Facilities Total																
Total																
Number of Deficiencies	**1**	**69**	**58**	**2**	**82**	**112**										
Repaired in Time Frame	**1**	**69**	**42**	**2**	**82**	**112**										
Repaired - Overdue	**0**	**0**	**0**	**0**	**0**	**0**										
Not Repaired - Not Due	**0**	**0**	**16**	**0**	**0**	**0**										
Not Repaired - Overdue	**0**	**0**	**0**	**0**	**0**	**0**										

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Underground

Underground Facilities	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Underground Structures															
Damaged Cover															
Number of Deficiencies		2,058			1,607										
Repaired in Time Frame		831			372										
Repaired - Overdue		1,106			0										
Not Repaired - Not Due		0			1,235										
Not Repaired - Overdue		121			0										
Damaged Structure															
Number of Deficiencies			5,951	325		10,619									
Repaired in Time Frame			2,313	12		242									
Repaired - Overdue			0	9		0									
Not Repaired - Not Due			3,638	8		10,377									
Not Repaired - Overdue			0	296		0									
Congested Structure															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Damaged Equipment															
Number of Deficiencies	8	14	2,283	62	198	260									
Repaired in Time Frame	5	12	2,275	40	81	79									
Repaired - Overdue	3	2	0	18	0	0									
Not Repaired - Not Due	0	0	8	1	117	181									
Not Repaired - Overdue	0	0	0	3	0	0									
Conductors															
Primary Cable															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Secondary Cable															
Number of Deficiencies		**4,993**	**12,631**		**3,716**	**4,726**									
Repaired in Time Frame		**3,339**	**9,039**		**2,837**	**2,519**									
Repaired - Overdue		**1,604**	**0**		**0**	**0**									
Not Repaired - Not Due		**0**	**3,592**		**879**	**2,207**									
Not Repaired - Overdue		**50**	**0**		**0**	**0**									
Neutral Cable															
Number of Deficiencies		**8,481**			**1,006**										
Repaired in Time Frame		**7,422**			**661**										
Repaired - Overdue		**1,030**			**0**										
Not Repaired - Not Due		**0**			**345**										
Not Repaired - Overdue		**29**			**0**										
Racking Needed															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Miscellaneous															
Other															
Number of Deficiencies	**108,186**	**309**		**20,064**	**1,049**										
Repaired in Time Frame	**108,186**	**11**		**19,871**	**608**										
Repaired - Overdue	**0**	**127**		**184**	**0**										
Not Repaired - Not Due	**0**	**0**		**1**	**441**										
Not Repaired - Overdue	**0**	**171**		**8**	**-**										
Underground Facilities Total															
Total															
Number of Deficiencies	**108,194**	**15,855**	**20,865**	**20,451**	**7,576**	**15,605**									
Repaired in Time Frame	**108,191**	**11,615**	**13,627**	**19,923**	**4,559**	**2,840**									
Repaired - Overdue	**3**	**3,869**	**0**	**211**	**0**	**0**									
Not Repaired - Not Due	**0**	**0**	**7,238**	**10**	**3,017**	**12,765**									
Not Repaired - Overdue	**0**	**371**	**0**	**307**	**0**	**0**									

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Pad Mount Transformers

Pad Mount Transformers	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Pad Mount Transformers															
Damaged Structure															
Number of Deficiencies		229		17	194										
Repaired in Time Frame		11		8	48										
Repaired - Overdue		45		9	1										
Not Repaired - Not Due				0	145										
Not Repaired - Overdue		173		0											
Damaged Equipment															
Number of Deficiencies		7			31										
Repaired in Time Frame		1			5										
Repaired - Overdue		1			0										
Not Repaired - Not Due					26										
Not Repaired - Overdue		5			0										
Cable Condition															
Number of Deficiencies	116	44	9	10	275										
Repaired in Time Frame	111	5	0	8	127										
Repaired - Overdue		4	0	1	0										
Not Repaired - Not Due			9	0	148										
Not Repaired - Overdue	5	35	0	1											
Oil Leak															
Number of Deficiencies	1	1		3	2										
Repaired in Time Frame				3	2										
Repaired - Overdue				0	0										
Not Repaired - Not Due				0	0										
Not Repaired - Overdue	1	1		0	0										
Off Pad															
Number of Deficiencies				13											
Repaired in Time Frame				10											
Repaired - Overdue				2											
Not Repaired - Not Due				0											
Not Repaired - Overdue				1											

Lock/Latch/Penta															
Number of Deficiencies	**11**			**42**											
Repaired in Time Frame	**5**			**42**											
Repaired - Overdue	**2**			**0**											
Not Repaired - Not Due				**0**											
Not Repaired - Overdue	**4**			**0**											
Miscellaneous															
Other															
Number of Deficiencies	**469**	**10**		**90**	**122**	**191**									
Repaired in Time Frame	**469**			**87**	**95**	**45**									
Repaired - Overdue				**3**	**0**	**0**									
Not Repaired - Not Due				**0**	**27**	**146**									
Not Repaired - Overdue		**10**			**0**	**0**									
Pad Mount Total															
Total															
Number of Deficiencies	**597**	**291**	**9**	**175**	**624**	**191**									
Repaired in Time Frame	**585**	**17**	**0**	**158**	**277**	**45**									
Repaired - Overdue	**2**	**50**	**0**	**15**	**1**	**0**									
Not Repaired - Not Due	**0**	**0**	**9**	**0**	**346**	**146**									
Not Repaired - Overdue	**10**	**224**	**0**	**2**	**0**	**0**									

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Streetlights

Pad Mount Transformers	2009			2010			2011			2012			2013		
Priority Level	I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
Repair Expected	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years	Within 1 week	Within 1 year	Within 3 years
Streetlights															
Base/Standar/Light															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Handhole/Service Box															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Service/Internal Wiring															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Access Cover															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															
Miscellaneous															
Other															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue															
Not Repaired - Not Due															
Not Repaired - Overdue															

Streetlight Total															
Total															
Number of Deficiencies															
Repaired in Time Frame															
Repaired - Overdue					-										
Not Repaired - Not Due				-											
Not Repaired - Overdue															

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process

Year	Prority Level / Repair Expected		Deficiencies Found (Total)	Repaired In-Time Frame	Repaired - Overdue	Not Repaired - Not Due	Not Repaired - Overdue
2009							
	I	Within 1 week	108,799	108,783	6	0	10
	II	Within 1 year	18,294	13,711	3,975	0	608
	III	Within 3 years	30,841	22,322	0	8,519	0
	IV	N/A	36,254	16,293	N/A	19,961	N/A
2010							
	I	Within 1 week	20,691	20,107	258	10	316
	II	Within 1 year	10,410	5,312	1	5,097	0
	III	Within 3 years	27,867	3,724	0	24,143	0
	IV	N/A	66,128	6,505	N/A	59,623	N/A
2011							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2012							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					
2013							
	I	Within 1 week					
	II	Within 1 year					
	III	Within 3 years					
	IV	N/A					

Summary of Deficiencies and Repair Activity Resulting from the Inspection Process - Level IV Conditions										
Overhead Facilities	**2009**		**2010**		**2011**		**2012**		**2013**	
	Number of Conditions Found	**Number of Conditions Repaired**	**Number of Conditions Found**	**Number of Conditions Repaired**	**Number of Conditions Found**	**Number of Conditions Repaired**	**Number of Conditions Found**	**Number of Conditions Repaired**	**Number of**	**Number of Conditions Repaired**
Overhead Facilities										
Pole Condition										
Pole Condition	**7,194**	**6,930**	**10,853**	**3**						
Grounding System										
Anchors/Guy Wire										
Cross Arm/Bracing										
Riser										
Conductors										
Primary Wire/Broken Ties										
Secondary Wire										
Neutral										
Insulators										
Pole Equipment										
Transformers										
Cutouts										
Lightning Arrestors										
Other Equipment										
Miscellaneous										
Trimming Related										
Other	**4,374**	**3,977**	**1,700**	**6**						
Overhead Facilities Total	**11,568**	**10,907**	**12,553**	**9**						
Transmission Facilities										
Tower/Poles										
Steel Towers	**44**	**0**	**50**	**0**						
Poles	**0**	**0**	**0**	**0**						
Anchors/Guy Wire	**0**	**0**	**0**	**0**						
Crossarm/Brace	**0**	**0**	**0**	**0**						
Grounding System	**37**	**10**	**46**	**10**						
Conductors										
Cable	**157**	**0**	**185**	**14**						
Static/Neutral	**6**	**3**	**7**	**1**						
Insulators	**184**	**12**	**316**	**14**						
Miscellaneous										
Right of Way Conditions	**169**	**4**	**259**	**25**						
Other	**290**	**145**	**172**	**30**						
Transmission Facilities Total	**887**	**174**	**1,035**	**94**						
Underground Facilities										
Underground Structures										
Damage Covers										
Damage Structures			**5,102**	**25**						
Congested Structures			**2018**	**94**						
Damage Equipment										
Conductors										
Primary Cable										
Secondary Cable										
Neutral Cable										
Racking Needed	**23,785**	**5,202**	**13,033**	**1,592**						
Miscellaneous										
Other			**31,832**	**4,352**						
Underground Facilities Total	**23,785**	**5,202**	**51,985**	**6,063**						
Pad Mount Transformers										
Underground Structures										
Damage Structures										
Damage Equipment										
Damage Cable										
Oil Leak										
Off Pad										
Lock/Latch/Penta										
Miscellaneous										
Other	**14**	**10**	**555**	**339**						
Pad Mount Transformers Total	**14**	**10**	**555**	**339**						
Streetlights										
Streetlights										
Base/Standar/Light										
Handhole/Service Box										
Service/Internal Wiring										
Access Cover										
Miscellaneous										
Other										
Streetlight Total										
Total Level IV Conditions										
Overall Total	**36,254**	**16,293**	**66,128**	**6,505**						

Exhibit 1

Certification of Contact Voltage Testing

Robert Schimmenti, on this 14th day of February 2011, certifies as follows:

1. I am Vice President of Consolidated Edison Company of New York, Inc. ("Con Edison" or "the Company").

2. I am responsible for overseeing Con Edison's contact voltage testing program, and in that capacity I have monitored the Company's contact voltage testing program during the twelve months ended December 31, 2010 ("the twelve month period"). During the twelve-month period, Con Edison instituted and diligently carried out a program designed to meet the contact voltage testing requirements of the Public Service Commission's Safety Standards, issued in Case 04-M-0159, Proceeding Instituting Safety Standards.

3. To the best of my knowledge, information, and belief, during the twelve month period, Con Edison identified and tested for contact voltage (i) all publicly accessible electric facilities owned by the Company, and (ii) all publicly accessible streetlights and traffic signals located in public thoroughfares in the Company's service territory and directly supplied by the Company as identified through a good faith effort by the Company, except for such facilities that are identified in the Company's Annual Report, submitted herewith.

Robert Schimmenti

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Certification of Inspections

Robert Schimmenti, on this 14th day of February 2011, certifies as follows:

1. I am Vice President of Consolidated Edison Company of New York, Inc. ("Con Edison" or "the Company").

2. I am responsible for overseeing Con Edison's electric facility inspection program, and in that capacity I have monitored the Company's inspection program during the twelve months ended December 31, 2010 ("the twelve-month period"). During the twelve-month period, Con Edison instituted and diligently carried out a program designed to meet the inspection requirements established by the Public Service Commission's Safety Standards, issued in Case 04-M-0159, Proceeding Instituting Safety Standards.

3. To the best of my knowledge, information, and belief, Con Edison has visually inspected the requisite number of electric facilities during the twelve-month period, including the requirement to have conducted a visual inspection of at least 20% of its electric facilities through December 31, 2010.

Robert Schimmenti